

Response Under 37 CFR 1.116  
Expedited Procedure  
Examining Group 2629

In the Claims:

1. (Previously Presented) Apparatus comprising a writing instrument and a writing pad for recording a data record, wherein said data record contains data corresponding to information set down on the writing pad with the aid of the writing instrument, in particular written text and/or a drawing, positions on the writing pad, said positions being associated with said information, a further identifier assigned to the writing pad, and wherein said recording is activated by the production of said information, and a position determination device that absolutely determines the position of the writing instrument on the writing pad, wherein an absolute determination of the position of the writing instrument with reference to the writing pad is performed via an area coding designed as at least one marking on said writing pad, wherein said writing instrument has an optoelectronic receiver for picking up the code and the writing pad comprises at least one optically detectable layer which is detected by the optoelectronic receiver on the writing instrument.
2. (Previously Presented) Apparatus according to Claim 1, characterized in that the apparatus contains first means for continuously determining the position of the writing instrument on the writing pad relative to a starting position for setting down the information, and second means for continuous absolute determination of the position of the writing instrument on the writing pad.

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3. (Previously Presented) Apparatus according to Claim 2, characterized in that the determination of the relative positions is performed in shorter time intervals than the determination of the absolute positions, and in that the first means determine the relative positions from the three-dimensional movement profile of the writing instrument, and the second means are designed as marking on the writing pad and a read-out unit, associated therewith, in the writing instrument, the relative positions thereby being adjusted given the presence of absolute positions.
- 4 (Previously Presented) Apparatus according to Claim 1, characterized in that the first means have three acceleration sensors, which are assigned three mutually orthogonal spatial directions, and have a two-dimensionally operating inclination sensor and at least one gyroscope, and in which that the second means are designed as a system which resembles a bar code, is applied uniformly to the writing pad and has location data in two mutually orthogonal directions, and as an associated optoelectronic sensor in the writing instrument.
- 5 (Previously Presented) Apparatus according to Claim 4, characterized in that the optoelectronic sensor is an infrared sensor.
- 6 (Previously Presented) Apparatus according to Claim 1, characterized in that the writing instrument comprises a processor device and/or a device for storing the data record.
- 7 (Previously Presented) Apparatus according Claim 1, characterized in that it comprises a transmitter and/or a receiver.
- 8 (Previously Presented) Apparatus according to Claim 1, characterized in that the apparatus detects the inclination of the writing instrument during the writing

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operation, and/or the speed at which the writing instrument is moved over the writing pad, and/or the acceleration of the writing instrument over the writing pad and/or the pressure of the writing instrument on the writing pad during the writing operation.

9. (Previously Presented) Apparatus according to Claim 1, characterized in that the receiver comprises a computer or can be connected to a computer, and/or the computer comprises at least one database, and data stored in the database are compared with the recorded data.
10. (Previously Presented) Apparatus according to Claim 1, characterized in that the computer and/or the processor device of the writing instrument has software or a hard wired logic in which an intelligent reading method is implemented.
- 11 (Previously Presented) Apparatus according to Claim 1, characterized in that the receiver is portable, for example like an electronic notebook or watch.
- 12 (Previously Presented) Apparatus according to Claim 1, characterized in that a user of the writing instrument, or the writing instrument itself is allocated at least one identification number and/or at least one password.
- 13 (Previously Presented) Apparatus according to Claim 1, characterized in that there is attached to the writing instrument a signaling device which, in particular, indicates when the reception of transmitted data does not progress correctly.
- 14 (Previously Presented) Apparatus according to Claim 1, characterized in that the transmitter comprises a buffer.
- 15 (Previously Presented) Apparatus according to Claim 1, characterized in that the writing pad comprises a code for identifying the writing pad.

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16. (Cancelled)
17. (Previously Presented) Apparatus having a written instrument which produces a two-dimensional image and which records the two-dimensional image in the form of signals, and having a writing pad with at least one field to be written in, wherein the recording is activated by the production of an information, and wherein an absolute determination of the position of the writing instrument with reference to the writing pad is performed via an area coding designed as at least one marking on said writing pad, wherein said writing instrument has an optoelectronic receiver for picking up the code and the writing pad comprises at least one optically detectable layer which is detected by the optoelectronic receiver on the writing instrument.
18. (Previously Presented) Apparatus according to Claim 17, characterized in that the writing pad comprises a magnetic layer.
- 19 (Previously Presented) Apparatus according to Claim 17, characterized in that the writing pad has a linear or non-linear magnetic array.
- 20 (Previously Presented) Apparatus according to Claim 1, characterized in that the writing instrument produces the two-dimensional image with the aid of ballpoint paste, a magnetic substance or an optically detectable substance.
21. (Previously Presented) Method for recording a data record, wherein said data record includes data corresponding to at least one item of information set down with a writing instrument on a writing pad,

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positions on the writing pad, said positions being associated with said

information, and

a further identifier assigned to the writing pad, wherein the recording is activated by the production of said information,

wherein the absolute determination of the position of the writing instrument with reference to the writing pad is performed via an area coding of at least one optically detectable layer designed as at least one marking on said writing pad which is detected by the optoelectronic receiver on the writing instrument, wherein said writing instrument has an optoelectronic receiver that picks up the code.

22. (Previously Presented) Method according to Claim 21, characterized in that the position of the writing instrument is determined from the movement of the writing instrument during the application of the information to the writing pad, and is corrected at prescribable time intervals via a determination of absolute position with reference to the writing pad.

23 (Previously Presented) Method according to Claim 21, characterized in that the determination of the relative positions is performed in shorter time intervals than the determination of the absolute positions, and in that the relative positions are determined from the three-dimensional movement profile of the writing instrument, and the absolute positions are determined via the marking on the writing pad and an associated read-out in the writing instrument.

24 (Previously Presented) Method according to Claim 21, characterized in that the acceleration of the writing instrument is determined with three acceleration

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sensors, which are assigned three mutually orthogonal spatial directions, and an inclination of the writing instrument is determined with the aid of a two-dimensionally operating inclination sensor, and a rotation of the writing instrument about its longitudinal axis is determined with the aid of a gyroscope, and in that the relative position of the writing instrument is determined from a two-fold integration with respect to time of the acceleration, taking account of the inclination and the rotation, and in that the absolute position is determined by using a system which resembles a bar code, is applied uniformly to the writing pad and has location data in two mutually orthogonal directions, and has an associated optoelectronic sensor in the writing instrument.

25. (Previously Presented) The apparatus according to Claim 1, wherein said data comprises at least one of written text and a drawing.